KSCST

Karnataka State Council for Science and Technology

(An autonomous organisation under the Dept. of Science & Technology, Govt. of Karnataka)
Indian Institute of Science Campus, Bengaluru – 560 012
Telephone: 080-23341652, 23348848, 23348849, 23348840
Email: office.kscst@iisc.ac.in, office@kscst.org.in • **Website:** www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. U T Vijay
Executive Secretary

Ref: 7.1.01/SPP/33

24th April, 2023

To,
The Principal,
Alva's Institute of Engineering and Technology,
Shobavana Campus, Mijar,
Moodbidri - 574 225.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : **46S_BE_2982**
Ref : Project Proposal entitled **DESIGN AND FABRICATION OF MULTIPURPOSE AGRICULTURE VEHICLE**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Mr. KUNDAR BHUSHAN	**Department**	MECHANICAL ENGINEERING
	Mr. CHRISTON LLOYD PINTO		
	Mr. GURUKIRAN		
	Mr. LIKHITH S SHETTY	**Sanctioned Amount (in Rs.)**	8,000.00
Guide(s)	Prof. HEMANTH SUVARNA		

Instructions:

a) The project should be performed based on the objectives of the proposal submitted.
b) Any changes in the project title,objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
c) Please quote your project reference number printed above in all your future correspondences.
d) After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link https://forms.gle/nWTaJjvrwzp3Wmvt6. The synopsis should include following:
   1) Project Reference Number
   2) Title of the project
   3) Name of the College & Department
   4) Name of the students & Guide(s)
   5) Keywords
   6) Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
   7) Objectives (about 10 lines)

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Alva's Institute of Engg. & Technology,
Mijar, MOODBIDRI - 574 225, D.K

8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)

9) Results and Conclusions (about 20 lines with specific reference to work carried out)

10) Scope for future work (about 20 lines).

e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.

f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.

g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.

h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and studetn(s) shall be uploaded in the following Google Forms Link https://forms.gle/YWz56TrGg7fnSQgc7. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,

(U T Vijay)

Copy to:

1) The HoD
MECHANICAL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOODBIDRI

2) Prof. HEMANTH SUVARNA
MECHANICAL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOODBIDRI

3) THE ACCOUNTS OFFICER
KSCST, BENGALURU

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI 590018

A project report on

"DESIGN AND FABRICATION OF RF-BASED MULTIPURPOSE AGRICULTURE VEHICLE"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

By

BHUSHAN KUNDAR	4AL18ME020
CHRISTON LLOYD PINTO	4AL19ME006
GURUKIRAN	4AL19ME010
LIKHITH S SHETTY	4AL19ME012

Under the Guidance of

Prof. Hemanth suvarna

Sr.Assistant Professor

Department of Mechanical Engineering

ALVAS INSTITUTE OF ENGINEERING AND TECHNOLOGY

MOODBIDRI-574225, KARNATAKA

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE

Certified that the project work entitled "**DESIGN AND FABRICATION OF RF-BASED MULTIPURPOSE AGRICULTURE VEHICLE**" *is a bona fide work carried out by*

BHUSHAN KUNDAR	**4AL18ME020**
CHRISTON LLOYD PINTO	**4AL19ME006**
GURUKIRAN	**4AL19ME010**
LIKHITH S SHETTY	**4AL19ME012**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **MECHANICAL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2022–2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academicrequirements in respect of the Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Prof. Hemanth Suvarna	**Dr. M. Satyanarayana**	**Dr. Peter Fernandes**

H.O.D. 23/5/2023
Dept. Of Mechanical Engineering
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

PRINCIPAL
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225, D.K

ABSTRACT

India relies heavily on agriculture, with 70% of its population dependent on farming for their livelihoods. However, due to the expanding population, farms are being divided among families, leading to an average farm size of just two acres. Consequently, farmers are economically deprived and cannot afford expensive farming equipment such as tractors. As a result, traditional methods of farming using animals like bullocks, horses, and buffalo are being employed for farming operations. These methods of farming are insufficient in meeting the energy demands of modern agriculture, particularly when compared to other countries worldwide.

To tackle this issue, we are developing innovative mechanization suitable for small-scale farmers from both economic and labor perspectives. Our equipment performs four farming operations, including digging, sowing, and spraying, and uses a 12V battery-powered motor for spraying. While cultivation and sowing operations still require manual labor, our attachments facilitate various farming operations in a speedy and cost-effective manner. We integrated the latest RF technology with an Arduino controller to achieve this.